

We claim:-

1. An aqueous dispersion of water-soluble polymers of ethylenically unsaturated anionic monomers, obtainable by free radical polymerization of the monomers in an aqueous medium in the presence of at least one stabilizer, wherein the polymerization is carried out in the presence of at least one water-soluble polymer from the groups consisting of
  - (a) graft polymers of vinyl acetate and/or vinyl propionate on polyethylene glycols, polyethylene glycols blocked at one or both terminal groups with alkyl, carboxyl or amino groups and/or copolymers of alkyl polyalkylene glycol methacrylates and methacrylic acid and at least one water-soluble polymer selected from
  - (b) hydrolyzed copolymers of vinyl alkyl ethers and maleic anhydride in the form of the free carboxyl groups and in the form of the salts at least partly neutralized with alkali metal hydroxides or ammonium bases, and/or of water-soluble starch from the group consisting of cationically modified potato starch, anionically modified potato starch, degraded potato starch and maltodextrin, as a stabilizer.
2. The aqueous dispersion according to claim 1, wherein polyalkylene glycols having molar masses  $M_n$  of from 100 to 100 000 and polyalkylene glycols blocked at one or both terminal groups with alkyl, carboxyl or amino groups and having molar masses  $M_n$  of from 100 to 100 000 are used as water-soluble polymers of group (a).
3. The aqueous dispersion according to either of claims 1 and 2, wherein hydrolyzed copolymers of vinyl alkyl ethers and maleic anhydride in the form of the free carboxyl groups and in the form of the salts at least partly neutralized with alkali metal hydroxides or ammonium bases and/or maltodextrin are used as water-soluble polymers of group (b).
4. The aqueous dispersion according to any of claims 1 to 3, wherein hydrolyzed copolymers of vinyl methyl ether and maleic anhydride in the form of the free carboxyl groups and in the form of the salts at least partly neutralized with sodium hydroxide solution, potassium hydroxide solution or ammonia are used

AMENDED SHEET

as water-soluble polymers of group (b).

5. The aqueous dispersion according to any of claims 1 to 4, wherein
- 5 (a) graft polymers of vinyl acetate on polyethylene glycols having a molecular weight  $M_n$  of from 1000 to 100 000
- and
- 10 (b) hydrolyzed copolymers of vinyl methyl ether and maleic anhydride in the form of the free carboxyl groups and in the form of the salts at least partly neutralized with sodium hydroxide solution, potassium hydroxide solution or ammonia are used as water-soluble polymers.
- 15 6. The aqueous dispersion according to any of claims 1 to 5, wherein
- (a) copolymers of alkyl polyalkylene glycol methacrylates and methacrylic acid
- and
- 20 (b) at least one hydrolyzed copolymer of vinyl methyl ether and maleic anhydride in the form of the free carboxyl groups and in the form of the salts at least partly neutralized with sodium hydroxide solution, potassium hydroxide solution or ammonia are used as water-soluble polymers.
- 25 7. The aqueous dispersion according to any of claims 1 to 6, wherein monoethylenically unsaturated  $C_3$ - to  $C_5$ -carboxylic acids, vinylsulfonic acid, styrenesulfonic acid, acrylamidomethylpropanesulfonic acid, vinylphosphonic acid and/or the alkali metal or ammonium salts thereof are used as anionic monomers.
- 30 8. The aqueous dispersion according to any of claims 1 to 7, wherein the polymerization of the anionic monomers is carried out in the presence of other ethylenically unsaturated monomers.
- 35 9. The aqueous dispersion according to claim 8, wherein the polymerization of the anionic monomers is carried out in the presence of at least one monomer from the group consisting of acrylamide, methacrylamide, acrylic esters of monohydric alcohols of 1 to 4 carbon atoms, methacrylic esters of monohydric alcohols of 1
- 40 or 2 carbon atoms, vinyl acetate, vinyl propionate, dialkylaminoethyl

(meth)acrylates, dialkylaminopropyl (meth)acrylates, diallyldimethylammonium chloride, vinylimidazole and quaternized vinylimidazole.

- 5 10. The aqueous dispersion according to any of claims 1 to 7, wherein, in the free radical polymerization, acrylic acid is used in the absence of other monomers.
11. The aqueous dispersion according to any of claims 1 to 9, wherein the polymerization is additionally carried out in the presence of at least one crosslinking agent.
- 10 12. The aqueous dispersion according to claim 11, wherein triallylamine, pentaerythrityl triallyl ether, methylenebisacrylamide, N,N'-divinylethylenurea, dihydric alcohols of 2 to 4 carbon atoms which are completely esterified with acrylic acid or methacrylic acid, ethoxylated trimethylolpropane triacrylates,
  - 15 ethoxylated trimethylolpropane trimethacrylates, pentaerythrityl triacrylate, pentaerythrityl tetraacrylate and/or triallylmethylammonium chloride are used as the crosslinking agent.
- 20 13. A process for the preparation of aqueous dispersions of water-soluble polymers of ethylenically unsaturated anionic monomers by free radical polymerization of the monomers in an aqueous medium in the presence of at least one stabilizer, wherein the polymerization is carried out in the presence of at least one water-soluble polymer from the groups consisting of
  - 25 (a) graft polymers of vinyl acetate and/or vinyl propionate on polyethylene glycols, polyethylene glycols blocked at one or both terminal groups with alkyl, carboxyl or amino groups, copolymers of alkyl polyalkylene glycol methacrylates and methacrylic acid,
  - 30 and at least one water-soluble polymer selected from
  - (b) hydrolyzed copolymers of vinyl alkyl ethers and maleic anhydride in the form of the free carboxyl groups and in the form of the salts at least partly neutralized with alkali metal hydroxides or ammonium bases, and/or
    - 35 maltodextrin,

as a stabilizer at a pH of from 1 to 13.
14. The use of an aqueous dispersion according to any of claims 1 to 12 as a

thickener for aqueous systems.

5

15. The use according to claim 14, wherein the aqueous dispersion can be added to a thickening system in the total pH range.
16. The use according to claim 14 or 15, wherein the aqueous dispersion is used as an additive to paper coating slips, as thickeners for pigment print pastes and for water-based surface coatings, as thickeners for cosmetic formulations and for the surface treatment of leather.